

Amendments to the Claims:

This listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of manufacturing a bipolar plate module comprising an anode plate, a cathode plate, and a membrane electrode assembly (MEA) disposed between the anode plate and the cathode plate, ~~the method steps comprising the steps of:~~

placing the anode plate, the cathode plate and the MEA within a mold; injecting a sealing material into the mold, whereby thereby the seal material fills grooves formed on the anode or the cathode plates to form an insulation layer, the material flows through through-holes formed in the grooves of either the anode plate or the cathode plate to form a sealing layer between the plates and to form an edge seal about a portion of the MEA; and

curing the sealing material to bind the anode plate to the cathode plate, thereby forming a bipolar plate module.

2. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 1, wherein the sealing material comprises a silicone material.

3. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 1, wherein the sealing material is epoxy nitrile.

4. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 1, wherein the pressure for injecting the sealing material is between about 300-700 lb/in².

5. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 1, wherein said temperature of the sealing material when injected into the mold is between about 75—400 degrees Fahrenheit.

6. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 1, wherein said curing step includes applying pressure to the anode and the cathode plates.

7. (Currently amended) A method of manufacturing a bipolar plate module comprising an anode plate, a cathode plate, and a membrane electrode assembly (MEA) disposed between the anode plate and the cathode plate, the method steps comprising the steps of:

screen printing a sealing material upon one of [[a]] an anode plate and a cathode plate;

positioning the MEA upon one of the anode plate and the cathode plate;

placing the other one of the anode plate and the cathode plate upon the MEA;

curing the sealing material to form a sealing layer between the anode and the

cathode plates and to form an edge seal about a portion of the MEA, thereby binding the anode plate to the cathode plate to form a bipolar plate module.

8. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 7, wherein the sealing material is deposited upon a perimeter of the anode or the cathode plate.

9. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 7, wherein the sealing material comprises a silicone material.

10. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 7, wherein the sealing material is epoxy nitrile.

11. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 7, wherein ~~the step of~~ said positioning the MEA upon one of the anode plate and the cathode plate is performed before said screen—printing step.

12. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 7, further including ~~the step of~~ forming an insulation layer between two bipolar plate modules.

13. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 12, wherein the sealing material fills grooves formed on the anode plate and the cathode plate to form the insulation layer.

14. (Currently amended) [[A]] The method of manufacturing a bipolar plate module according to Claim 7, wherein said curing step includes applying pressure to the anode and the cathode plates.